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ABSTRACT

The Second Grade Underachievers Program seeks to test the efficacy of educationally oriented play groups as a remedial educational technique as contrasted with individual tutoring, or a combination of tutoring plus educational play groups. The program attempts to interest and involve neighborhood agencies in more after-school programs that are educationally supportive in scope. Since seven-year-old children should be most receptive to educational material when it is presented creatively in the context of games, inasmuch as play is naturally more relevant to them than serious learning exercises, the project used innovative group play techniques to teach and reinforce learning by second graders diagnosed and referred to as underachievers by their teachers. The play technique, it is felt, might also overcome the anxiety that underachieving second graders might feel in the classroom. (JM)

Mobilization for Youth, New York City

AN EXPERIMENTAL AFTER-SCHOOL PROGRAM FOR UNDERACHIEVING SECOND GRADERS

SEP 1 1967 AUG 31 1968

ED039295

The major aim of the Second Grade Underachievers Program (SGUP) was to test the efficacy of educationally oriented play groups as a remedial adjunct to the school curriculum as opposed to individual tutoring, or a combination of tutoring plus educational play groups. The program was deliberately constructed to get neighborhood agencies interested and involved in more after-school programs that are educationally supportive in scope rather than the usual programs which are sports or social group oriented. The project relied heavily on innovative group play techniques to teach and reinforce learning by second graders diagnosed and referred as underachievers by their teachers. The rationale being that seven year old children should be most receptive to educational material when it is presented creatively in the context of games inasmuch as play is naturally more relevant to them than serious teaching exercises. This should be especially true of primary grade children who are already seriously retarded in classwork who often realize that they are much behind. The classroom for such children, in many instances, merely reinforces their anxieties about learning so much so that most become dropouts, psychologically, long before this is matched by their physical withdrawal from high school. Therefore, in underprivileged neighborhoods, where most of the schools have empirically proven themselves to be academically ineffective, one is not being facetious in speaking of dropouts in the primary grades.

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The program was restricted to second graders because it was felt that by the time third grade is reached, many learning problems are often too far advanced. On the other hand, it was also felt that the beginning of first grade might be too soon to effectively screen underachievers.

RESEARCH DESIGN, SUBJECTS, PERSONNEL:

A total of 160 children were referred from eight neighborhood schools, twenty children from each school. In the main, twenty children from a given school were referred by two teachers, each teacher referring ten children. However, in several schools the twenty respective children were divided among three teachers.

Children whose first language was not English, who had not been in an English speaking school system for one year were not accepted into SGUP. Likewise, children severely disturbed, organically retarded or physically handicapped were excluded. In addition to the above restrictions, it was also requested that no second grade repeater be referred. These stipulations were made to prevent group workers and tutors from having to deal with problems that could have been overwhelming from the outset, to guard against having too great an age distribution and to hold constant the amount of exposure to second grade material. Furthermore, the less than nine month time allocation and the major focus of SGUP rendered open referrals unfeasible.

It was requested that all children referred have difficulty in the academic area. (According to the teachers, 16% of the children accepted into the project had emotional, behavioral or environmental

problems which appeared to be superordinate to their educational problems.) However, all the children referred came from the lower second grade levels except from one school whose grades were not calibrated. Hence, many of the children from the heterogeneous classes of this school were comparatively more advanced academically than those who came from the remaining schools, as the desire was not to work with more than three teachers from any one school.

It was obvious at the planning stage of SGUP that objective conclusions regarding the efficacy of educationally oriented play groups could best be drawn by including random assigned control groups of children with similar school problems. Therefore, in addition to respective children who were to be involved exclusively in either educational play groups, tutoring or these two services combined, a fourth group of children equal in number to each of the three groups was included. These children received no educationally oriented services, but instead, received a placebo treatment in the form of attending various agencies for recreational activities, conducted by non-professional volunteers. Their attendance at these agencies was scheduled to be just as frequent (twice weekly) as that of children receiving educational services. This was done so that "special attention" and "time in after-school activities" would be constant variables for all children, which would make any differences seen between groups on the dependent variable easier to interpret. Furthermore, by allowing the control children to attend recreational groups, it permitted the research staff to keep close check on them so that achievement tests could be administered to them too at the beginning and end of the school year.

Still another more compelling reason control children were

scheduled to attend non-educational groups is that their being picked up at school like the experimental children suggested to the teachers that they were receiving academic help too, which, of course, eliminated bias in teacher judgments considerably. Not only did the teachers not know that some children were not receiving academic help, they also were unaware of what specific kinds of educational assistance any SGUP children were receiving.

Neighborhood high school boys and girls were hired to tutor children randomly assigned for tutoring. The rationale here was twofold. First, it was believed that indigenous teenagers would display more empathy and thereby establish better rapport with the children than professional adult tutors or tutors from dissimilar environments. Secondly, it was essential that Spanish and Chinese speaking children accepted into SGUP with some but inadequate English skills have tutors capable of assisting them in their language problems. Thus in both the literal and figurative sense, the project necessitated tutors that could "speak the children's language".

Ideally, group leaders as well as tutors should have been able to speak Spanish inasmuch as 69% of SGUP children were from Spanish speaking homes. However, only moderate success was met here in that less than half of the group leaders and their assistants spoke Spanish.

A table of the project's research design can be seen in the Appendix, Table I. Likewise, the ethnic composition, sex composition and their ages at referral can be seen in Tables II, III and IV of the Appendix respectively.

PROCEDURE:

Each of the four professional or experienced group workers were

assigned to two neighborhood agencies and two schools (See Table V in Appendix). Immediately after referrals for SGUP were received from the teachers, the four workers made home visits to get parental permission to let their children participate. When a parent refused permission, the worker then asked the referring teacher for another child who met referral criteria. Less than 8% of the total children referred had parents who refused permission. Indeed, some of the mothers composing the 8% did not grant permission due to the child being in poor health.

After each worker had obtained the parents permission they submitted the names of their respective 40 children to the project's research staff so that they could be randomly assigned to the four educational groups, the four educational plus tutoring groups, tutoring and the four control groups. Each worker was to have ten children in each of these groups. Since only the most academically retarded students were requested, students had to be selected from schools all over the Lower East Side. The physical distance between some of these schools and the social agencies made random assignment of pupils difficult. Children simply could not walk the distance involved. This affected the group assignment procedure for children belonging to three of the four group workers. Instead of being able to use completely random procedure that included 40 children, the overall procedure was one in which 20 children were parcelled into two different groups of ten, which was performed twice for the above three workers to complete assignments for their 40 children.

The procedure was simply this. The boys were arranged in alphabetical order, then the girls (20 total), and numbered consecutively. Then the outcome of a flipped coin determined which of the

two groups the odd or even numbered children would be assigned.

It can be seen in Table V of the Appendix that in all but one instance, a neighborhood church was paired with a neighborhood settlement house. The type of service held at a given agency as well as the relationship of the four group workers to agencies and schools can also be seen in this table.

DATA COLLECTION AND INSTRUMENTS:

There were five sources from which data were collected: teachers, school records, staff workers having contact with the children, non-participating MFY observers and MFY independent testing of children.

1. MFY INDEPENDENT TESTING -

At the beginning of the program all referred children were given a standardized achievement test at the various settlement houses and churches after school. The Metropolitan Achievement Test (MET) Battery, Primary I, which is normally used in first grade, was administered instead of Primary II. Although the latter is a second grade achievement test, it was too advanced for children in SGUP. Nevertheless, achievement ranges almost to the fourth grade can be obtained on the Primary I.

The MET Primary I is composed of four separate subtests: Word Knowledge, Word Discrimination, Reading and Arithmetic Concepts and Skills. The Word Knowledge test has 35 items that measure the child's vocabulary, or word recognition ability. The child is required to associate words with pictures representing the words. The Word Discrimination test has 35 items that measure the child's ability to select an orally presented word from among a group of similar words. The child must be able to associate the sound of the

word, when read by the tester, with its printed form. The Reading test has two parts. The first part requires the child to read and comprehend sentences while the second part goes so far as requiring the child to read, comprehend and make inferences about paragraphs. The total Reading test has 46 items. The last of the 4 MET subtests, Arithmetic Concepts and Skills, tests mastery of basic numerical and quantitative concepts in a manner independent of reading ability. Part of the test is timed and the child is required to add and subtract single digit numbers. The Arithmetic test has 63 items.

The MET was administered to experimental and control children twice; as close to the beginning and as near the end of the school year as possible. Word Knowledge and Arithmetic were administered at the first sitting inasmuch as these tests seemed to arouse little anxiety in the children. Sufficient rest and recreation were allowed between the two tests. The test times for Arithmetic and Word Knowledge are approximately 23 minutes and 15 minutes respectively.

Word Discrimination and Reading were administered at the second sitting with time for rest allowed between the two tests. The test times for Word Discrimination and Reading are approximately 12 minutes and 35 minutes respectively.

A third MET testing session and (infrequently a fourth) was scheduled to pick up children who were absent from the first and/or second sitting. Likewise, groups that showed fatigue or children whose time at the agency expired before testing was completed were picked up on the third or fourth testing session.

In the main, the METs administered at the beginning of the year were given when the children were in grade placement 2.2 (Second

month of second grade) while the majority of the tests administered at the end of the year were given when the children were in 2.8. Alternate but comparable forms of the MET were given at the end of the year to circumvent the form used in the schools when the children were in grade placement 2.6.

It was learned at the testing sessions at the beginning of the year that testing children in groups of 20 was not feasible, even with as many as two assistants per examiner.* The children were much more active in the informal agency setting than they would have been in school. The test, given by trained MFY staff, was administered as well as could be expected under the above circumstances. While the scores obtained at the beginning of the year might not be precisely correct, it is not felt that they are invalid. Furthermore, whatever errors may have been reflected in the scores for one type of group most likely occured in the others too.

2. TEACHER REPORTS -

At the beginning of the school year, mid year and near the end of the school year, data were gotten from the teachers in the form of standardized behavior instruments as well as original questionnaires.

At the beginning of the year a referral questionnaire was sent to all teachers along with a Pupil Behavior Inventory (PBI). The PBI is a standardized rating scale which measures the extent of pupil conformity to behavior standards maintained both officially and unofficially by schoool personnel. It is said to provide a

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*Children were tested in groups of five at the end of year, but it is suspected that groups of ten could have been tested rather efficiently.

measure of those behavioral and attitudinal factors which affect the degree of success a pupil will have in accomplishing his educational objectives. The PBI has 34 items which when rated by the teachers form five dimensions: Classroom Conduct, Academic Motivation, Socio-Emotional State, Teacher Dependency and Personal Behavior.

a) Classroom Conduct has items that refer to behavior among pupils and behavior between pupil and teacher. It is said to be a measure of student adaptability for classroom management.

b) Academic Motivation and Performance has items which refer to attributes which aid in development of the pupil's academic knowledge and skill. This dimension is sensitive to teacher's perception of change in student motivation.

c) Socio-Emotional State deals with peer relationships, the ability to form social relationships with other individuals and the apparent effect of these associations upon his personal disposition.

d) Teacher Dependency measures the pupil's need for assurance from the teacher. It is useful in identifying withdrawn behavior which is indicated by a low score, but it can also be expected that teachers may rate the items lower in the dimension during the time a pupil is receiving certain services because the practitioner's effort may be directed toward helping pupils to seek help and assurance from teachers.

e) Personal Behavior is an indicator of the pupil's conformance to standards which are valued and sanctioned in the broader community and which may be manifested as a part of his behavior in the classroom.

At mid year, the teachers were sent their second questionnaire, their second PBI and their first Bristol Social Adjustment Guides

(BSAG). Essentially the BSAG has nine scales, each of which has several items that fall in mild to severe categories. Briefly, the scales are:

1. U Inhibition: lack of confidence, assertiveness and curiosity
2. D Depression: irritability, ups and downs of energy
3. XA Anxiety concerning interpersonal relations with adults
4. HA Hostility toward adults
5. K Lack of concern for adult approval
6. XC Anxiety concerning peer acceptance
7. HC Hostility toward peers
8. R Restlessness: inability to concentrate and persevere
9. W Withdrawal: defenses set up against human contact and against being loved.

The authors state the purpose of the BSAG as being to detect behavior disturbance and to diagnose its type and extent. The instrument offers a systematic recording of behavior for children ages 5 to 16. The authors do not claim the instrument to be a measure of personality but they suggest that when it is used in a presumably normal situation, in which most children appear as well adjusted, ratings on the scale will show whether or not the children in question display a tendency to behave in a maladjusted way.

Near the end of the school year the teachers were sent their third questionnaire, their third PBI and their second BSAG.

3. SCHOOL RECORDS -

Two of the four MET Primary I subtests, Reading and Word Knowledge, were planned to be given to all second graders in participating schools. The tests were administered by school officials three months before school closed and scores were made

available to MFY for both non-project children and 80% of the children in SGUP. The scores of the non project children were given but only the sex of the children was indicated, no names, inasmuch as MFY did not have permission from their parents to get individual information. MFY was able to circumvent giving the same form of the MET used at the schools by using alternate forms which were comparable.

4. STAFFWORKERS HAVING CONTACT WITH PROJECT CHILDREN -

The four educational group leaders were required to complete and submit to MFY at the end of each week a questionnaire developed mainly to ascertain which games and activities were employed and how effective they thought they were. Tutors were required to keep notebooks on individual children and complete a questionnaire at mid year and school closing. Control group leaders and their assistants also submitted a questionnaire at the end of the year regarding their children.

5. NON PARTICIPATING MFY OBSERVERS -

Non participating MFY observers were periodically sent to the various group and tutoring sessions. They completed and submitted observation forms designed mainly to ascertain how well the educational group leader and tutors adhered to their roles and how effective their activities were.

RESULTS AND DISCUSSION:

1. Achievement Test Results: All children in SGUP were scheduled to receive the MET Primary I Battery at the beginning and near the end of the school year, to be used as the major criterion of academic change. Unfortunately this was not achieved for every child due to some dropping out of the project (See Table VI of the

Appendix) and absentees on testing days. However, the task of testing all children twice was accomplished for the vast majority of the children from each of the three major experimental groups as well as the control group. The discrepancy between achievement level and grade placement at the time tested was obtained for each child. Group averages were then obtained, using only children who were examined on the MET at both the beginning and end of the school year. Statistical tests were made on the discrepancy between the values reflecting how far the groups were below (on or above) grade level at the beginning of the year, and those values obtained at the end of the year. For example, if a given group at the beginning of the year obtained an average achievement score of 2.1 (one month of second grade) while their grade placement at testing was 2.2 (second month of second grade) this would be indicative of the group being one month below grade level (-.1). Likewise if the same group obtained an average achievement score of 2.5 at the end of the school year while their grade placement was actually 2.8, they would then be three months below grade level (-.3). The value to be used for this group in the statistical test is the discrepancy between -.1 and -.3, which means that the group dropped two months more below their initial level (-.2) of being one month below grade level. Using this method made it possible to ascertain whether each group's achievement level at the end of the school year was indicative of adverse or positive change, or no change at all.

The Kruskal-Wallis, a non-parametric one way analysis of variance, was used to test the overall significance between the four groups on each MET subtest, Word Knowledge, Word Discrimination, Reading and

Arithmetic. It is feasible to make statistical comparisons of two groups at a time in a multi-group study only if an overall multi-group comparison is statistically significant (i.e. .05 or less) due to the fact that the more comparisons made, the more likely it is that some significant results will be obtained purely by chance. (For example, if the four groups here are compared two at a time, six comparisons, the probability of getting one significant result at alpha .05 is almost .30).

There was no overall significance between groups on Word Knowledge, but the converse was true for Word Discrimination, Reading and Arithmetic. Therefore, group achievements were further analyzed statistically on the latter three subtests.

WORD DISCRIMINATION: Of the 6 comparisons made between the four groups, two at a time, four comparisons were statistically significant. These were: (1) Control vs. Tutoring (P=.0074*, Control Group more favorable) (2) Control vs. Educational Group (P=.0046*, Control Group more favorable) (3) Educational Group and Tutoring vs. Tutoring (P=.0072*, Educational Group and Tutoring more favorable) (4) Educational Group and Tutoring vs. Educational Group (P=.0198, Educational Group and Tutoring more favorable.

Table I below describes these results obtained on Word Discrimination

TABLE I

WORD DISCRIMINATION TEST RESULTS FOR CHILDREN IN SGUP

GROUP	N	Group Level at Beginning of yr	Group level at End of year	Group Increment	Group Decrement
Ed Group	38	-.761	-.950	----	.189
Ed Grp+T	27	-.648	-.670	----	.022
T	33	-.758	-1.009	----	.251
C	30	-.693	-.587	.106	--

*two tailed test

It can be seen above in Table I that the testing at the beginning and end of year showed all groups as being below grade level on Word Discrimination, the most favorable group being six months retarded at the beginning (Ed Grp + T) while the most favorable group was almost 6 months retarded at the end of the school year (Control Group). It can also be seen in the table that only the Control Group's level at the end of the year reflects an increment in Word Discrimination. In summary, the Control Group and Educational Group + Tutoring did significantly better than Educational Group and the Tutoring children, but they were not significantly different from each other.

While Table I above describes the group differences in terms of the discrepancy between their achievement levels and grade placement levels, Table II below shows the difference by the proportion of children in each group whose achievement levels were below, on or above grade level.

TABLE II

PROPORTION OF CHILDREN IN SGUP GROUPS BELOW ON OR ABOVE GRADE LEVEL IN WORD DISCRIMINATION

GROUP	N	Beginning of Year			End of Year		
		Below	On	Above	Below	On	Above
Ed Group	38	36	6	2	34	3	1
Ed Grp+T	27	26	1	0	24	2	1
T	33	32	0	1	31	0	2
C	30	30	0	0	25	2	3

A x^2 (Chi Square) test of significance between group proportions revealed that there was a significant difference between groups regarding the number of children whose Word Discrimination achievement levels dropped and those whose achievement levels remained the same*

*Identical achievement levels (relative) should be considered as being favorable, as opposed to adverse change, inasmuch as it denotes that the child was keeping up to where he was initially which is indicative of his learning more material.

or increased ($P < .01$). The expectant frequences in the "Improved/same" category and those in the "Dropped" category are more favorable for the Control Group and Educational Group + Tutoring than they are for Educational Group or Tutoring. This is consistent with the results obtained when the data were statistically analyzed by the discrepancy between the achievement level and grade level at the beginning and end of year. Therefore, it is conclusive that the Control Group and the Educational Group + Tutoring did significantly better on Word Discrimination than the Educational and Tutoring Groups. This is true from both the quantitative and proportional perspectives.

READING: None of the 6 comparisons made between the four groups was significant. All groups were below grade level at both testings. However, the Control Group and Educational Group showed a slight and a very slight increment in Reading respectively, while the Educational Group + Tutoring and Tutoring Groups showed slight and very slight decrements respectively. Table III below describes these Reading results.

TABLE III

READING TEST RESULTS FOR CHILDREN IN SGUP

GROUP	N	GRP LEVEL BEGINNING OF YEAR	GROUP LEVEL END OF YEAR	GROUP INCREMENT	GROUP DECREMENT
Ed Group	38	-1.068	-1.061	.007	---
Ed Gp + T	28	- .893	- .911	---	.018
T	33	- .958	- .988	---	.030
C	30	- .950	- .870	.080	---

It can be seen in the increment and decrement columns of Table III that the Control Group's slight increment is almost one month. The other three group's Reading levels at the end of the year are

virtually the same as the beginning. These results can be interpreted as favorable for all groups inasmuch as if no learning had been accomplished in Reading the decrements would have been considerably larger.

Like the results seen on Word Discrimination, the Control Group again holds the most favorable position, although not statistically different from the other groups. These results are not expected inasmuch as they received recreational activities conducted by lay people while the other groups received educational services. An explanation of these results will be attempted in the Conclusion and Recommendation section.

Table IV below shows the proportion of children in each group whose Reading levels were Below, On or Above grade level.

TABLE IV

PROPORTION OF CHILDREN IN SGUP GROUPS BELOW ON OR ABOVE GRADE LEVEL IN READING

		Beginning of Year			End of Year		
GROUP	N	Below	On	Above	Below	On	Above
Ed Group	38	38*	0	0	36+	0	2
Ed Gp + T	28	28**	0	0	27	0	1
T	33	33***	0	0	31	0	1
C	30	30****	0	0	27	1	2

*13 of 38 Ed Group children scored below first grade (i.e. 1.0-)
**2 of 28 Ed Group + T children scored below first grade
***6 of 33 Tutoring children scored below first grade
****1 of 30 Control children scored below first grade
+1 of 36 Educational Group children scored below first grade

A x^2 (Chi square) test of significance between group proportions revealed that there was no significant different between the groups regarding the number of children whose achievement levels dropped and those whose achievement levels remained the same or increased in Reading ($P > .50$).

It can be seen by the (*) in Table IV that some children scored below first grade in Reading. Since "below first grade" does not tell one how far a child was below first grade on the MET, the writer arbitrarily assigned the value .9 (nine months) to all such children so that a concrete base for comparing these subsequent scores could be made. The rationale seemed feasible inasmuch as 1.0 (first grade) is the lowest precise level obtainable on the MET. However, it is quite possible that the arbitrary value, .9 could be too high which would affect the conclusions already drawn regarding the Educational Group in Reading inasmuch as this group had a vast number of children who scored 1.0- initially while the other groups had relatively few.

Figure I below describes the MET calibration of achievement levels. Note that arbitrary .9 fits the overall system.

FIGURE I

MET CALIBRATION OF ACHIEVEMENT LEVELS

1.	.9	Arbitrary
2.	1.0 to 1.9 (first grade to nine months of first grade)	Manual Stated
3.	2.0 to 2.9 (2nd grade to nine months of second grade)	
4.	3.0 to 3.9 (3rd grade to nine months of third grade)	

ARITHMETIC: Of the 6 comparisons made between the four groups, two groups at a time, two comparisons were statistically significant on Arithmetic. These were:

1. Tutoring vs. Ed Group (P=.0104, Tutoring more favorable)
2. Tutoring vs. Control (P=.0160, Tutoring more favorable)

Table V below describes these results obtained on Arithmetic.

TABLE V

ARITHMETIC TEST RESULTS FOR CHILDREN IN SGUP

GROUP	N	Group Level Beg of Year	Group Level End of Year	Group Increment	Group Decrement
Ed Group	38	-.742	-.979	--	.237
Ed Gp+T	27	-.785	-.881	--	.096
T	34	-.847	-.871	--	.024
C	31	-.723	-.894	--	.171

It can be seen above in Table V that the testing at the beginning of the year and at the end of the year showed all groups to be below grade level; the most favorable group being seven months below grade level at the beginning (Control Group), while the most favorable group was almost nine months below grade level at the end of the year (Tutoring). The discrepancy between each group's level at the beginning and end of the year reflects a decrement. The Tutoring children dropped very slightly while the Educational Group+Tutoring children dropped almost one month. The Educational Group dropped slightly over two months while the Control Group dropped almost two months.

Table VI below shows the proportion of children in each group whose arithmetic achievement levels were below, on or above grade level.

TABLE VI

PROPORTION OF CHILDREN IN SGUP GROUPS BELOW, ON OR ABOVE GRADE LEVEL IN ARITHMETIC

		Beginning of Year			End of Year		
GROUP	N	Below	On	Above	Below	On	Above
Ed Group	38	36*	1	1	34	3	1
Ed Grp+T	27	27**	0	6	26	0	1
T	34	33***	0	1	32@	0	2
C	31	27****	3	1	29	1	1

*5 of 38 Educational Group children were below first grade
**4 of 27 Educational Group+Tutoring children were below first grade
***4 of 34 Tutoring children were below first grade
****3 of 31 Control children were below first grade
@1 of 32 Educational Group children were below first grade

A x^2 (Chi Square) test of significance between group proportions revealed that there was a significant difference between groups regarding the number of children whose arithmetic achievement levels dropped and those whose achievement levels remained the same or increased (P .01). The expectant frequences in the "improved/same" category and those in the "dropped" category were most favorable for the Control Group and Tutoring, in that order. Thus, the tutored children hold a comparatively more favorable position from both the quantitative and proportional perspective on Arithmetic while the Control Group holds a comparatively adverse position quantitatively but its position is favorable in terms of proportion.

WORD KNOWLEDGE: It was mentioned that the overall statistical test between groups on Word Knowledge was not significant (P .50), therefore, quantitative comparisons of the groups, two at a time were not made. Nevertheless, a x^2 (Chi Square) test between the proportion of children in each group who improved or remained the same or dropped was made. This test was not statistically significant either (P .30). Nevertheless, Table VII is presented to describe the group's achievement levels at the beginning and end of the year and Table VIII is presented to describe the number of children who were below, on or above grade level.

TABLE VII

WORD KNOWLEDGE TEST RESULTS FOR SGUP CHILDREN

GROUP	N	Gp Level Beg of Yr	End of Yr	Gp Incr	Gp Dec
Ed Group	38	-.682	-.961	--	.279
Ed Gp+T	27	-.581	-.854	--	.293
T	34	-.682	-1.056	--	.374
C	31	-.571	-.806	--	.235

It can be seen in Table VII above that each group was below grade level at the beginning and at the end of the school year. It is also seen that their final test result reflects similar decrements.

TABLE VIII

PROPORTION OF CHILDREN IN SGUP GROUPS BELOW, ON OR ABOVE GRADE LEVEL IN WORD KNOWLEDGE

GROUP	N	BEGINNING OF YEAR			END OF YEAR		
		Below	On	Above	Below	On	Above
Ed Group	38	37	0	1	35	0	3
Ed Gp+T	27	27	0	0	27	0	0
T	34	31*	0	3	32	0	2
C	31	30	0	1	31	0	1

Table IX below is presented to summarize the outcome of the groups in the four MET subtests when their achievement levels at the beginning and end of year were compared. The second and fourth columns in the Table denote whether the statistical test was significant. Where the statistical tests were not significant, the groups presented in columns one and two crudely means that their positions were in the more favorable direction.

TABLE IX

SUMMARY OUTCOME OF GROUPS ON MET SUBTESTS

MET SUBTESTS	MOST FAVORABLE 2 GPS ON QUANTITATIVE COMPARISON	SIG	MOST FAVORABLE 2 GPS PROPORTIONAL COMPAR	SIG
Word Disc	Control, Ed Grp+T	Sig	Control, Ed Gp+T	Sig
Reading	Control, Ed Group	Not Sig	Control, Tutoring	Not Sig
Arithmetic	Tutoring, Ed Gp+T	Sig	Control, Tutoring	Sig
Word Knowl	Control, Ed Group	Not Sig	Ed Grp, Ed Gp+T	Not Sig

*1 of 34 Tutored children scored below 1st grade.

Table IX above suggests that the groups that improved most to least overall are: Control, Ed Group+T, Tutoring and Ed Group respectively.

OTHER VARIABLES -

SEX: The children who improved were analyzed to see if a disproportionate number of them were girls. This was not the case. There appears to be no relationship here between sex and improvement on MET achievement tests.

ATTENDANCE: The attendance rate for the vast majority of SGUP children was high. At least 70% of the children in each of the four major groups missed fewer than five sessions. Several children had perfect attendance. However, no evidence was found to indicate that the children who missed less than five sessions were significantly different from children in respective groups who missed five sessions or more, regarding the proportion whose achievement level increased on Word Knowledge, Word Discrimination, Reading and Arithmetic, and those whose achievement level dropped on all four tests. At least in part, this can be attributed to the fact that the mode of the two absentee distributions were not grossly different in value.

OBSERVER'S DATA REGARDING FOUR DIFFERENT EDUCATIONAL GROUP LEADERS

Periodically, non-participating observers attended the educational groups. Among other information gotten the observers rated the leaders on (1) how obvious or vague the educational components in the activities were in terms of their relating to the second grade curriculum; (2) how effective the activities seemed to be in terms

of the children demonstrating they had understood the material: (3) how eager the children were to participate.

All four of the workers were rated highly in the last two categories and three of them were rated highly on the first category. The worker who received low ratings in the first category had a proportionally large number of activities described as "vague" by the observer. In spite of this, however, this particular worker's children do not appear to be significantly different from two of the other worker's children. The worker who did have considerably more Educational Group and Educational Group+Tutoring children improve than the other three workers, also had a higher proportion of children improve in Tutoring and the Control Group. This might be attributed, in part, to the fact that the worker had children from the school whose second grade was heterogeneous. Children on different levels attended the same classroom. A broad comparison of each worker's 40 children on their average achievement level for all MET subtests combined, revealed that the worker who had more children improve in each of her four groups than the other workers (the uncalibrated second grades), had children whose achievement levels were higher than the other children at referral. While this particular worker's children averaged -.661 initially, the other worker's children averaged -.679, -.810 and -.821.

2. MET Test Results From School Records: The majority of children in SGUP were given the entire MET battery when they were in grade placement 2.2 (2nd month of 2nd grade) and when they were in grade placement 2.8. School officials did not administer the entire battery but they did test most second graders once on Word

Knowledge and Reading. At that time the children were in grade placement 2.6.

An analysis of the non-project children's achievement scores showed that they were slightly but not significantly above children in various groups of SGUP on Word Knowledge and Reading. However, the most underachieving children were referred to the project. Inasmuch as no achievement tests were given at school at the beginning of the year, no interpretation can be made regarding the slight advantage in achievement scores held by non-project children at 2.6.

3. PBI Results: The Pupil Behavior Inventory was sent to teachers at the beginning, mid and end of the year. This inventory is standardized and it contains five dimensions. When items in each dimension were rated by the teachers on a five point scale, it produced behavioral scores for the children in the various groups of SGUP. The five dimensions are Classroom Conduct, Academic Motivation, Socio-Emotional State, Teacher Dependency and Personal Behavior.

An "Analysis of Differences" (a method for comparing multi-groups simultaneously by applying analysis of variance techniques to the difference between subject's X (before) and Y (after) scores was applied to the four groups, 1st vs. 2nd PBI scores and to 2nd vs. 3rd scores on all five dimensions. None of these tests proved to be statistically significant. When this became known, the groups 1st vs. 3rd PBI scores were compared; the rationale being that a larger amount of time between the teacher's ratings might yield more difference between the groups. Like the 1st vs. 2nd and the 2nd vs.

3rd PBI comparisons, there was no significant difference between groups regarding their 1st vs. 3rd PBI scores.

Looking at individual groups, it is seen that each group's PBI score is near the mean of the five point scale utilized in rating their behavior on all five dimensions on both their 1st and their 3rd ratings. This suggests that each group's behavior in each dimension was essentially average with no substantial change by the end of the year. Actually, no group's PBI score dropped as much as .40 on Classroom Conduct, Academic Motivation, Teacher Dependency and Personal Behavior. Likewise, but even less adverse, no group's score dropped as much as .25 on Socio Emotional State.

Very slight PBI increments were achieved by the children in Tutoring on Academic Motivation and Socio Emotional State while a moderately high increment was obtained by these same tutored children on Teacher Dependency. The increment in this latter dimension suggests that children in Tutoring became more open to seeking assistance from their teachers as a result of their relationship with their tutors. The only other groups that showed increments on any of the five PBI dimensions are the Control Group and the Educational Group+Tutoring. The Control Group showed a moderate increase in Academic Motivation and the children in Educational Group+Tutoring showed a very slight increment in Teacher Dependency. However, this latter group's slight increment does nevertheless support the previous hint that tutoring facilitated the children becoming less shy in seeking help from their teachers.

As a crude check to see the relative direction of the four group's PBI's each group was placed under each of the five dimensions according to the amount of difference between their 1st PBI and 2nd

PBI scores and again according to the discrepancy between their 2nd PBI and their 3rd PBI scores. The group with the most favorable score in each dimension was given the value 4 while the group with the least favorable score was given the value 1. The values were totaled resulting in Educational Group having a score of 29, Educational Group+Tutoring 29, Tutoring 22 and Control Group 22. These values are probably not significantly different either, but they are in the direction of children who were in some type of education group, i.e. once a week and twice a week.

4. Bristol Social Adjustment Guides: Nine dimensions of the BSAG were analyzed b y the percent of children from the 4 groups that (1) had no severe items checked by their teachers at mid-year or end of the year; (2) had fewer severe items checked at the end of the year than mid year; (3) had same number of severe items checked at end of year as mid year; (4) had more severe items checked at end of year than mid year. For a comprehensive view of these results see Table VII of the Appendix. However, the results of #2, "Groups who had fewer severe items checked by their teachers at the end of the year than mid year" are presented below in Figure V.

FIGURE V

GROUP HAVING MOST FAVORABLE PERCENT REGARDING TEACHERS CHECKING FEWER SEVERE BSAG ITEMS AT END OF YEAR THAN MID YEAR

Dimension	Group with most favorable %
U Inhibition	Educational Group
D Depression	Educational Group
XA Anxiety with adults	Tutoring
HA Hostility toward adults	Educational Group
K Lack of concern for adult approval	Tutoring
XC Anxiety over peer acceptance	Tutoring
HC Hostility toward peers	Tutoring
R Restlessness	Tutoring
W Withdrawal	Educational Group + Tutoring

Figure V above suggests that Educational Groups and Tutored children may have derived therapeutic gains as a result of these services.

5. Promotions to the Third Grade: According to the last questionnaire received from the teachers, 100% of the children in the Educational Groups were promoted compared to 92% of the children in Educational Group + Tutoring, 92% of the children in Tutoring, and 89% of the Control children. However, the teachers made it clear on numerous occasions that factors other than academic skills persuaded them to promote some children. These reasons fall into the general area of adverse psychological factors affecting the child should he be retained, i.e. too large, sibling coming into the same grade etc. Most teachers expressed awareness that these children they were promoting were below grade level but they expressed optimism that these children would perform better in third grade.

CONCLUSIONS AND RECOMMENDATIONS:

It may be concluded from this study that the project was successful in certain secondary ways. It succeeded in:

1) Getting neighborhood agencies interested and involved in educational services for neighborhood children.

2) Proving that 7 year old children not only can be worked with in groups, but that the groups are capable of becoming cohesive units. This was exemplified by the ability of children in some groups to vote on issues and abide by the majority vote, and by various types of group pressures exerted on non-conforming members.

3) Establishing working relationships with teachers and parents

regarding their children participating in after-school programs.

4) Helping children for whom English was a second language with their language problems.

It seems rather clear that the results do not support the efficacy of Educational Groups as opposed to the three other services offered. In fact, overall, the data suggests that the Control Group did significantly better. On first thought, one is tempted to believe that perhaps the theoretical basis for play educational groups is invalid. Yet there are several important factors that, at least, exert caution against this interpretation and possibly suggest otherwise. These factors are:

1) Bias in assigning children to groups.

2) Disproportionate number of dropouts and absentees from retest between groups.

3) Imbalance between groups on the number of children scoring below first grade.

1. BIAS IN ASSIGNING CHILDREN TO GROUPS -

A completely random procedure for assigning children to the various groups could not be utilized due to the fact that the paired neighborhood agencies assigned to three of the four workers were not located near both of their respective schools. Furthermore, the relatively limited facilities available at several neighborhood agencies dictated which two of the four different services could best be accommodated. These factors influenced a conscious bias in assigning 3/4 of the children to groups. That is, it was predetermined before assigning 3 of the 4 workers' children, which agency they would go to and which two of the four services would be

rendered. This resulted in 120 of the 160 children being "semi-randomly" assigned to their respective groups, and almost half of the teachers in the project having had no chance for any of their children being in the Control Group. The teachers were therefore dichotomized into those who mainly had children in either the Control Group or Education Group + Tutoring, and those who mainly had children in Tutoring or Educational Group.

Table Xa and Xb below shows this imbalance by the teachers who had and did not have children in the Control Group and the number of children who improved or dropped on the four MET tests.

TABLE Xa

TEACHERS WITH AND WITHOUT CHILDREN IN THE CONTROL GROUP AND THE OUTCOME ON ACHIEVEMENT TESTS.

MET TESTS	Teachers With No Control Children (N=10)															
	# children improved						# children dropped						Total # children			
	Ed	Grp	Ed	Gp+T	T	C	Ed	Gp	Ed	Gp+T	T	C	Ed	Gp	Ed	Gp+T	T	C
Word Know	6		1		3	-	27		2		26	-	33		3		29	0
Word Disc	9		0		5	-	23		2		22	-	32		2		27	0
Read	12		2		12	-	20		1		16	-	32		3		28	0
Arith	8		1		11	-	24		1		17	-	32		2		28	0

TABLE Xb

MET TESTS	Teachers With Control Children (N=9)															
	# children improved						# children dropped						Total # children			
	Ed	Gp	Ed	Gp+T	T	C	Ed	Gp	Ed	Gp+T	T	C	Ed	Gp	Ed	Gp+T	T	C
Word Know	3		6		3	7	3		19		3	21	6		25		6	28
Word Disc	3		14		3	18	3		11		3	11	6		25		6	29
Read	5		10		5	16	1		15		0	13	6		25		5	29
Arith-metic	2		10		6	11	4		15		0	19	6		25		6	30

It can readily be seen above in the total column that the teachers who had no children in the Control Group also had few children in

Education+Tutoring. Conversely, teachers with children in the Control Group had the majority of their children in that group and the Educational Group. Therefore, if the ten teachers who had no control children were more (or less) competent at teaching than the nine teachers having control children, the results would be biased despite the effectiveness of this educationally supportive program.

The small number of cases (N) for two groups of children who belong to the "no C children teachers" and the small "N" for the opposite two groups who belong to the "C children teacher", precludes a meaningful statistical comparison between the proportion of children who improved and dropped by these two teacher categories for a given group. However, by inspection, these data hint that the number of children who improved and dropped in achievement who belong to Tutoring and Educational Groups - the two groups that have a relative sizeable N for both categories of teachers - were more favorable for the "C children teachers". This was supported somewhat by a Chi Square test on Word Discrimination between all the children who belonged to the "No C children teachers" and the "C children teachers" regarding those who improved or remained the same and those who dropped in achievement. The test was highly significant ($P < .001$) in favor of the children belonging to the "C children teachers". In actual numbers, 28 of 66 children who had "teachers with C children" dropped in achievement on this test compared to 47 of 61 children who had "Teachers with no C children". While these results guardedly suggest that the teachers who had C children may have been more competent, they do not definitely prove this to be fact.

An attempt was made to shed more light on the question of why the C children made the most impressive gains by circumventing the

the issues of teacher competence and imbalanced distribution of groups. This was done by analyzing the proportion who dropped and the amount of achievement on Word Discrimination* for all SGUP children in the context of their respective teachers. A careful inspection was made on each teacher who had C children and children of another group in her class where the N's of the compared groups were more than one but not too dissimilar in number; eight teachers met these requirements. An extract of these results is presented below in Table XI.

TABLE XI

COMPARISON OF C CHILDREN'S ACHIEVEMENT ON WORD DISCRIMINATION WITH CHILDREN OF SAME TEACHER IN OTHER GROUPS.

Teacher	# Children in Group				Grp's Aver Mos Achiev Per Teach				Outcome
	C	Ed Gp	Ed Gp+T	T	C	Ed Grp	Ed Gp+T	T	Gp Most Favor
#4	3	-	2	-	-3.33	-	-4.00	-	Ed Gp+T
#5	2	-	3	-	-3.45	-	+ .33	-	Ed Gp+T
#9	3	4	-	-	-2.30	-1.25	--	-	Ed. Group
#11	4	-	4	3	+4.50	-	+3.50	+.33	C
#12	7	-	4	-	+2.00	-	- .50	-	C
#13	3	-	3	-	+3.33	-	+2.33	-	C
#18	3	-	5	-	- .33	-	-2.00	-	C
#19	3	-	2	-	+ .33	-	+ .50	-	Ed Gp+T

Only one teacher in the above table had C and Educational Group children in her class (Teacher #9). In this single instance the C children's achievement dropped one month more than that of Educational Group children. However, in the majority of the comparisons, the comparisons between C children and Educational Group+Tutoring children, it is seen that C children held the more favorable position more often and have the largest increment obtained by any group, over four months (i.e. Teacher #11), but the Educational Group+Tutoring children's overall achievement is nevertheless impressive too. Even though the

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*Word Discrimination was chosen over the other three tests because the total C children (and Ed Gp+T) scored significantly higher in achievement over Ed Group and the children in Tutoring.

suspicion exists that the teachers who had C children were more competent than those who did not, the above finding suggests that the C children, nevertheless made slightly more achievement gains than the Educational Group+Tutoring children when both groups had the same teacher.

Unfortunately, because C children were compared only once with children in Tutoring and Educational Group in the context of their having the same teacher, still no conclusion can be drawn regarding the validity of the C children having an overall better achievement than these two groups as a result of their participation in SGUP.

Comprehensive tables of all SGUP children's performance on Word Discrimination per teacher are presented in the Appendix, Tables VIIIA to VIIID. Note that there is marked variability between teachers (e.g. Teacher #3 had all of 8 children to drop in achievement while Teacher #11 had only 2 of 11 children to drop.) Schools A,B,C and D are decentralized to community control while schools E,F,G and H are not.

Chi Square tests of significance were made between the decentralized schools and the centralized schools on Word Knowledge, Word Discrimination, Reading and Arithmetic regarding the proportion of children who improved or dropped in achievement. The results on Arithmetic were highly significant ($P < .001$) in favor of decentralized schools while the results of the other three tests were not statistically significant. This finding might be interpreted to mean that the performance of teachers in decentralized schools might be above that of their colleagues in centralized schools, or the SGUP was more effective with decentralized schools than those not

decentralized (or interaction between these two factors).

2. DISPROPORTIONATE NUMBER OF DROPOUTS AND ABSENTEES FROM RETEST -

It is possible that children who dropped out of the project and those who were absent from retest may have been from the most unstable families in the project and were therefore perhaps the most retarded underachievers. If this is so, then a disproportionate number of such children belonging to a particular group would create a bias in the positive direction for that group by virtue of their exclusion. Figure VI below shows the number of children in SGUP who dropped out and the number who were tested only at the beginning of the school year due to their having dropped out or their being absent from school on the days of the second testing.

FIGURE VI

NUMBER OF CHILDREN IN SGUP WHO DROPPED OUT AND THE NUMBER TESTED ONLY AT THE BEGINNING OF THE SCHOOL YEAR

	ED GROUP	ED GROUP + TUTORING	T	C
# Dropouts	2	9	4	8
# Tested only once	1	11	7	7

Figure VI above shows that the two groups who were reported as having made the most favorable overall achievement, C and Education Group+Tutoring, did in fact have the most dropouts and absentees from retest. Conversely, the group that was reported as having made the least favorable achievement, Educational Group, had the fewest dropouts and absentees from retest. The two categories are not mutually exclusive; about one child in each of the four groups who dropped out of the program was tested once. Therefore, the majority of the children who were tested only once were absent from

the second test due to school absentees* rather than their not being in the program. This means that a comparison of MET scores of children tested only once with the first scores of those tested twice will not permit inferences to be made regarding academic deficits of children who dropped out. The statistics below pertain almost entirely to absentees vs. children tested twice.

TABLE XII

BEGINNING OF YEAR MET ACHIEVEMENT LEVELS** OF ABSENTEES AND DROPOUTS VS. CHILDREN TESTED TWICE

	N	Ed Gp	N	Ed Gp+T	N	T	N	C
WORD KNOWLEDGE								
Dropouts and/or absentees	1	-.70	11	-.55	7	-.63	7	-.61
Children completed program, Tested twice	38	-.68	27	-.58	34	-.68	31	-.57
WORD DISCRIMINATION								
Dropouts and/or absentees	1	-.80	11	-.54	7	-.69	7	-.64
Children completed program, tested twice	38	-.76	27	-.65	33	-.76	30	-.69
READING								
	N	ED Gp	N	Ed Gp+T	N	T	N	C
Dropouts and/or absentees	1	- .70	11	-.95	7	-.99	7	-.96
Children completed program, tested twice	38	-1.07	28	-.88	33	-.96	30	-.95
ARITHMETIC								
	N	Ed Gp	N	Ed Gp+T	N	T	N	C
Dropouts and/or absentees	1	-.80	11	-.75	7	-.66	7	-.83
Children completed program, tested twice	38	-.74	27	-.79	34	-.84	31	-.66

The data in Table XII above overwhelmingly suggests that at the

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*Children were met at school by responsible parties of respective groups and walked to their service agency.

**The ten column denotes the number of months above or below grade level. i.e. -.70 means seven months below grade level.

beginning of the year the children who were present at that time only were not significantly different in achievement than those who were subsequently tested again at the end of the year. Unfortunately, it is unknown what achievement level the following dropouts were at due to their not receiving either the test at the beginning of the year or the one at the end of the year: a) 1 of 2 Educational Group children, b) 8 of 9 Educational Group+Tutoring children, c) 3 of 4 Tutoring children and, d) 6 of 8 Control children. Therefore, even though the data suggests that the children tested only at the beginning of the year were not significantly different at that time from those tested twice, the relevance of the fact that more Control and Educational Group+Tutoring children than Tutoring or Education Group children dropped out of the program is unknown. The possibility that they were the most severe underachievers in their respective groups does exist.

3. IMBALANCE BETWEEN GROUPS ON THE PROPORTION OF CHILDREN SCORING BELOW FIRST GRADE -

The lowest precise value obtainable on the MET Achievement Tests administered is "first grade" (i.e. 1.0). It was explained earlier that an arbitrary value of .9 was assigned to children scoring "below first grade" (i.e. 1.0-). Since it is possible that this logical, designated value could have been too high an estimate of at least some of the children's achievement level, the data were further analyzed to see how this influenced the outcome of various groups in achievement at the end of the year; particularly Education Group vs. Control Group, whose overall performances were most adverse and most favorable respectively.

Figure VII below is presented to show the imbalance between groups regarding proportions scoring below first grade on Reading and Arithmetic. Only one child scored below first grade on Word Knowledge and no one scored below first grade on Word Discrimination; therefore these two subtests are eliminated.

FIGURE VII

NUMBER AND PROPORTION OF CHILDREN SCORING BELOW FIRST GRADE ON READING AND ARITHMETIC

	Ed Grp	Ed Gp + T	T	C
READING:				
# below first grade, beg of yr only	16	2	7	3
# below first grade, end of yr only	2	0	0	0
# below 1st grade, both beg & end	0	0	0	0
Total number and percent	18(47%)	2(7%)	7(21%)	3 (10%)
ARITHMETIC:				
# below first grade beg of yr only	3	5	3	3
# below first grade end of yr only	0	0	0	0
# below first grade both beg & end	2	0	1	0
Total number and percent	5(13%)	5(19%)	4(12%)	3(10%)

It can be seen in Figure VII above regarding Reading that a vast proportion of the Ed Grp (47%) scored below first grade, which is more than double the proportion in the next highest group (Tutoring 21%) and almost seven times the group with the smallest proportion (Ed Grp+T 7%). Unlike the Reading results, the discrepancies between group proportions scoring below first grade on Arithmetic are not wide, the Ed Grp + T has the largest proportion below first grade (19%) while the C group has the smallest (10%).

When the achievement levels of children who scored below first grade in the Education Group are eliminated from the total group it produced a negligible difference in both Reading and Arithmetic for that group. On Reading, the increment of the total Education Group is .007 while the increment for children of that group who scored above first grade is .035. Similarly, on Arithmetic the decrement

of the total Education Group is slightly over two months (.237) while the decrement for this group minus those scoring below first grade is also slightly over two months (.239, see Tables XIII and XIV below). Indeed, the pattern of achievement levels for groups regarding children who scored above first grade is not unlike the pattern seen by total groups. In fact, the discrepancy between the Control Group and the Education Group's achievement levels on Reading, in regard to children who scored above first grade, is greater than it was when their levels were compared by total group. Still, the Control group holds the more favorable position. While this does show conclusively that the Control children who scored above first grade made more academic gains in Reading than the Educational Group children who scored above first grade, it still does not allow one to conclude that the arbitrarily assigned .9 value for eighteen children in the Educational Group yielded an accurate description of their achievement level by total group.

Tables XIII below describes the achievement levels of each group on Reading and Arithmetic by total group, children who scored above first grade only, and those who scored below first grade.

TABLE XIII

READING ACHIEVEMENT LEVELS - TOTAL GROUP, CHILDREN SCORING ABOVE FIRST GRADE AND CHILDREN SCORING BELOW FIRST GRADE

CHILDREN TESTED	WHEN TESTED	Achievement Level			
		Ed Group	Ed Grp+T	Tutoring	Control
Total Group	Beg of yr	-1.068	-.893	-.958	-.950
	End of yr	-1.061*	-.911**	-.988**	-.870*
		IN=.007	DE=.018	DE=.030	IN=.080
		(N=38)	(N=28)	(N=33)	(N=30)
Children Scoring Above 1st grd only	Beg of yr	-.870	-.862	-.846	-1.007
	End of yr	-.835*	-.877**	-.962**	- .848*
		IN=.035	DE=.005	DE=.116	IN=.159
		(N=20)	(N=26)	(N=26)	(N=27)
Children scoring below 1st grd only	Beg of yr	-1.289	-1.300	-1.371	-1.300
	End of yr	-1.311**	-1.350**	-1.086*	-1.067*
		DE=.022	DE=.050	IN=.285	IN=.233
		(N=18)	(N=2)	(N=7)	(N=3)

*Score reflects an increment (IN) in achievement
**Score reflects a decrement (DE) in achievement

TABLE XIV

ARITHMETIC ACHIEVEMENT LEVELS: TOTAL GROUP, CHILDREN SCORING ABOVE FIRST GRADE AND CHILDREN SCORING BELOW FIRST GRADE

Children Tested	When Tested	Achievement Level			
		Ed Grp	Ed Gp+T	Tutoring	Control
Total Group	Beg of yr	-.742	-.785	-.847	-.716
	End of yr	-.979**	-.881**	-.871**	-.894**
		DE=.237	DE=.096	DE=.024	DE=.171
		(N=38)	(N=27)	(N=34)	(N=31)
Children Scoring Above 1st grade	Beg of yr	-.658	-.668	-.787	-.661
	End of yr	-.897**	-.805**	-.790**	-.850**
		DE=.239	DE=.137	DE=.003	DE=.189
		(N=33)	(N=22)	(N=30)	(N=28)
Children Scoring Below 1st grade	Beg of yr	-1.300	-1.300	-1.300	-1.300
	End of yr	-1.520**	-1.220*	-1.475**	-1.300
		DE=.220	IN=.080	DE=.175	IN=.000
		(N=5)	(N=5)	(N=4)	(N=3)

*Score reflects an increment (IN) in achievement
**Score reflects a decrement (DE) in achievement

Despite the inconclusiveness regarding the reasons for the direction of the obtained achievement results, it is obvious that the project was a success in many ways.

1) It is obvious that the groups benefitted from SGUP as

exemplified by (a) neither of the four groups dropped as much as one month in Reading; (b) neither of the four groups dropped as much as three months in Word Discrimination or Arithmetic and; (c) no group dropped as much as four months in Word Discrimination. Keeping in mind that the SGUP children were the worst underachievers in the second grades of their schools (most groups were at least eight months retarded on most of the MET tests at the beginning of the year and several groups were retarded more than one year) these findings are significant indeed. In regard to total groups, it can therefore be said that the rate of retardation was severely arrested. Furthermore, in cases of individual children, some increased their achievement level by one year or more.

2) Although standardized behavioral data showed little improvement of total groups due to each group's behavior being essentially normal at the outset, individual children who showed adverse deviation from the average initially did improve tremendously by the end of the year. (This was especially true for withdrawn children.) Teachers' subjective impressions corroborated this finding.

Several recommendations to improve SGUP this coming school year are suggested:

1) An assignment procedure that will significantly correct or eliminate bias between groups and marked teacher variability.

2) A more intensive coordination of SGUP services with daily school work will probably enhance achievement.

3) The inclusion of at least one male group leader and the pairing of opposite sex assistant group leaders would maximize rapport.

4) The use of paid control group leaders rather than volunteers to assist in stabilizing that group.

5) Similar to the testing procedure used at the end of the school year, children should be tested in groups no larger than ten with the examiner having at least one assistant.

6) Unsolicited, complimentary reports on children who were involved in the first year of the program have already been received at the beginning of this second year from third grade teachers, guidance counselors, etc. Therefore, it is felt that at least a moderate, planned follow-up study is indicated. It may well be true that many benefits (or the intensity of some benefits) children in SGUP derived were not immediately measurable.

APPENDIX

TABLE I

Research Design for Second Grade Project

Service Rendered	# of children	# of groups	Working Staff	# of Weekly Mtgs	Average Duration of Meetings
Educational Group (Experimental)	40	4	2 MSW 2 college grads 4 assts	1	1:45
Educational Group plus Tutoring 2 children per tutor (Experim)	40	4	above staff 20 tutors	1 1	1:45 1:45
Tutoring - 2 children per tutor (Exper)	40	4	20 tutors same as above	2	1:45
Recreation Group (Experim)	40	4	4 leaders 4 assts (mainly VISTA)	2	1:45

(TABLE II)

TABLE III

SEX COMPOSITION PER MAJOR GROUP OF CHILDREN IN THE SECOND GRADE UNDER-ACHIEVERS PROGRAM

	MALE		FEMALE	
	#	%	#	%
Educational Groups	25	16	15	9
Educational/Tutoring	21	13	19	12
Tutoring	24	15	16	10
Control Groups	22	14	18	11
	92	58	68	42

TABLE IV

MEAN AGE PER MAJOR GROUP AT REFERRAL

	MEAN AGE
Educational Group II	7-4
Educational Group I	7-5
Tutoring	7-5
Recreational Groups	7-6

TABLE V

SGUP SCHOOL/AGENCY PAIRING AND SERVICES RENDERED

PARTICIPATING SCHOOLS	# CHILDREN REFERRED	# TEACHERS REFERRING	GRP WORKRS ASSIGNED	NEIGHBORHOOD AGENCIES	SERVICE RENDERED
1	20	2	1	Settlement House #1	Ed Gp+T Tutoring
1	20	2		Church #1	Ed Group Control
1	20	2	1	Settlement House #2	Ed Grp Ed Gp+T
1	20	2		Church #2	Tutoring Control
1	20	2	1	Settlement House #3	Ed Gp+T Tutoring
1	20	2		Church #3	Ed Group Control
1	20	2	1	Settlement House #4	Ed Grp+T Tutoring
1	20	2		Settlement House #5	Ed Grp Control

TABLE VI

DROPOUTS FROM SGUP

MAJOR GROUPS	INITIAL N	N EARLY MAY	DEFICIT
Educational Groups	40	38	2
Educational Groups +T	40	31	9
Tutoring	40	36	4
Control Groups	40	32	8
TOTAL	160	137	23

No child in SGUP was replaced by another child if he left his group as late as three months after his group commenced. The reason the majority of the children had to be dropped from the program was due to their families moving out of the neighborhood, a few as far as Puerto Rico. Forty percent of the 23 dropped were lost for this reason. Four children, almost 3%, were lost due to their being referred for psychiatric treatment. Other reasons children were lost are the parent or child decided to withdraw and health problems.

TABLE VII

PERCENT OF CHILDREN BY CATEGORIES REGARDING TEACHER RESPONSE TO SEVERE ITEMS ON BRISTOL SOCIAL ADJUSTMENT GUIDES

	GROUP	U	D	XA	HA	K	XC	HC	R	W
(1) No severe items checked at mid year or end of yr	GS II	43.3	10.0	23.3	53.3	73.3	50.0	56.7	56.7	16.7
	GS I	50.0	34.6	42.3	73.1	57.7	50.0	88.5	88.5	26.9
	T	50.0	32.1	39.3	46.4	60.7	32.1	60.7	60.7	28.5
	C	63.2	52.6	26.3	84.2	94.7	52.6	89.5	89.5	36.8
(2) Fewer severe items checked at end of yr than mid yr	GS II	33.3	40.0	13.3	20.0	3.3	10.0	10.0	10.0	30.0
	GS I	11.5	34.6	19.2	11.5	6.7	15.4	11.6	11.5	38.5
	T	25.0	28.6	28.6	14.3	7.1	32.1	17.2	17.9	25.0
	C	21.1	21.1	21.1	5.3	0.0	15.9	0.0	0.0	21.1
(3) Same # of severe items checked at end of yr as mid year	GS II	6.7	13.3	36.7	6.7	3.3	13.3	20.0	20.0	13.3
	GS I	7.7	7.7	19.2	7.8	11.5	7.7	0.0	0.0	11.5
	T	7.1	10.7	17.9	21.4	7.1	10.7	0.0	0.0	17.9
	C	0.0	5.3	21.1	5.3	0.0	5.3	0.0	0.0	5.3
(4) More sev. items checked at end of yr than mid yr	GS II	16.7	33.3	23.3	20.0	20.0	26.7	13.3	13.3	40.0
	GS I	30.8	23.1	19.2	7.7	19.2	26.9	0.0	0.0	23.0
	T	17.9	28.6	25.0	17.9	25.0	25.0	21.4	21.4	28.6
	C	15.8	21.1	31.6	5.3	5.3	21.1	10.5	10.5	31.6

Number of cases

Group Service II----30 children
Group Service I-----26 children
Tutoring----------28 children
Control-----------19 children

U=Inhibition
D=Depression
XA=Anxiety with adults
HA=Hostility towards adults
K=Lack of concern for adult approval
XC=Anxiety over peer acceptance
HC=Hostility towards peers
R=Restlessness
W=Withdrawal

TABLE VIII A

CHILDREN'S ACHIEVEMENT ON WORD DISCRIMINATION PER TEACHER FOR WORKER #1

School	Teacher	Tot # Chldrn Tstd pr teach	Group Classroom Composit. Pr Teach	# and % children dropped in achiev pr teacher	Grp % of tot child dropped per teacher	Grp avg # months achievement per teacher
	#1	7	Ed Gp(4) T(3)	6(86%)	Ed Gp(43%) T(43%)	Ed Gp(-1.50 mo) T(-4.33 mo)
A	#2	4	Ed Gp(2) T(2)	1(25%)	Ed Gp(0%) T(25%)	Ed Gp(+4.50 mo) T(0.0 mo)
	#3	8	Ed Gp(4) T(4)	8(100%)	Ed Gp(50%) T(50%)	Ed Gp(-4.75 mo) T(-6.50 mo)
Total & average School A	3	19	Ed Gp(10) T(9)	15(79%) i.e. 15 of 19	Ed Gp(70%) 7 of 10 T(89%) 8 of 9	Ed Gp(-1.90 mo) T(-4.33 mo) Total months sum / TOTAL N
	#4	5	Ed Gp+T(2) C(3)	5(100%)	E G+T(40%) C(60%)	Ed Gp+T(-4.00 mo) C(-3.33 mo)
B	#5	5	Ed Gp(3) C(2)	3(60%)	E G+T(20%) C(40%)	Ed Gp+T(+ .33 mo) C(-3.45 mo)
	#6	1	Ed G+T(1)	1(100%)	E G+T(100%)	Ed Gp+T(-4.00 mo)
Total & average School B	3	11	Ed G+T(6) C(5)	9(82%) i.e. 9 of 11	E G+T(67%) i.e. 4 of 6 C(100%)i.e. 5 of 5	Ed Gp+T(-1.83 mo) C(-3.40 mo) i.e. Total months sum / Total N

TABLE VIII B

CHILDREN'S ACHIEVEMENT ON WORD DISCRIMINATION PER TEACHER FOR WORKER #2

SCHOOL	TEACHER	TOT # CHLDRN TESTED	GROUP CLASSROOM COMPOSITION	# AND % CHLDRN DRPD IN ACHIEV	GROUP % OF TOT CHILDREN DROPPED	GROUP AVERAGE # MONTHS ACHIEVEMENT
C	#7	6	Ed Gp(2) Ed Gp+T(1) T(2) C(1)	4(67%)	Ed Grp(17%) Ed G+T(0%) T(33%) C(17%)	Ed Gp(+.50 mo) Ed G+T(0.0 mo) T(-4.50 mo) C(-4.00 mo)
	#8	3	Ed Gp(2) T(1)	2(67%)	Ed Gp(33%) T(33%)	Ed Gp(-3.00 mo) T(-1.00 mo)
	#9	9	Ed Gp(4) Ed G+T(1) T(1) C(3)	4(44%)	Ed Gp(22%) Ed G+T(11%) T(0%) C(11%)	Ed Gp(-1.25 mo) Ed G+T(-5.00 mo) T(+1.00 mo) C(-2.30 mo)
TOTAL & AVERAGE SCHOOL C	3	18	Ed Gp(8) E G+T(2) T(4) C(4)	10(56%) i.e. 10 of 18	Ed Gp(50%)i.e. 4 of 8 E G+T(50%)i.e. 1 of 2 T(75%)i.e.3 of 4 C(50%)i.e.2 of 4	Ed Gp(-1.25 mo) E G+T(-2.50 mo) T(-2.25 mo) C(+.75 mo) i.e. Total mo sum / Total N
D	#10	2	Ed Gp(1)	2(100%)	Ed Gp(50%)	Ed Gp(-6.00 mo) Ed G+T(-2.00 mo)
	#11	11	E G+T(4) T(3) C(4)	2(18%)	E G+T(9%) T(9%) C(0%)	Ed G+T(+3.50 mo) T(+.33 mo) C(+4.50 mo)
TOTAL & AVERAGE SCHOOL D	2	13	Ed Gp(1) E G+T(5) T(3) C(4)	4(31%) i.e. 4 of 13	Ed Gp(100%)i.e. 1 of 1 E G+T(40%)i.e. 2 of 5 T(33%)i.e.1of3 C(0%)	Ed Gp(-6.00 mo) Ed G+T(+2.40 mo) T(+.33 mo) C(+4.50 mo) i.e. Total mo sum / Total N

TABLE VIII C

CHILDREN'S ACHIEVEMENT ON WORD DISCRIMINATION PER TEACHER FOR WORKER # 3

School	Teacher	Tot # Childrn Tested	Group Classroom Composition	# and % Children Dropped in Achievement	Group % of Total Children Dropped	Group average # months achievement
E	#12	11	Ed Gp+T(4) C(7)	3(27%)	Ed G+T(18%) C(9%)	Ed G+T(-.50 mo) C(+2.00 mo)
	#13	6	Ed Gp+T(3) C(3)	1(17%)	E G+T(0%) C(17%)	E G+T(+2.33 mo) C(+3.33 mo)
TOTAL & AVERAGE SCHOOL E	2	17	Ed Gp+T(7) C(10)	4(24%)i.e. 4 of 17	E G+T(29%) i.e.2 of 7 C(20%) i.e.2 of 10	E G+T(+.71 mo) C(+2.40 mo) i.e. Tot mo sum / Total N
F	#14	11	Ed Grp(4) T(7)	7(64%)	Ed Gp(18%) T(45%)	Ed Gp(-1.00 mo) T(- .71 mo)
	#15	8	Ed Gp(5) T(3)	8(100%)	Ed Gp(62%) T(38%)	Ed Gp(3.80 mo) T(-7.00 mo)
TOTAL & AVERAGE SCHOOL F	2	19	Ed Gp(9) T(10)	15(79%) i.e. 15 of 19	Ed Gp(78%) i.e.7 of 9 T(80%)i.e. 8 of 10	Ed Gp(-2.89 mo) T(-2.60 mo) i.e.Tot mo sum / Total N

TABLE VIII D

CHILDREN'S ACHIEVEMENT ON WORD DISCRIMINATION PER TEACHER FOR WORKER #4

SCHOOL	TEACHER	TOT & CHLDRN TESTED	GROUP CLASSROOM COMPOSITION	# & % CHLDRN DRPD IN ACHIEV	GROUP % OF TOT CHILDREN DROPPED	GROUP AVERAGE # MONTHS ACHIEVEMENT
G	#16	9	Ed Gp (5) T (4)	5(56%)	Ed Gp(33%) T(22%)	Ed Gp(-2.40 mo) T(-1.75 mo)
	#17	8	Ed Gp (5) T (3)	7(88%)	Ed Gp(50%) T(38%)	Ed Gp(-3.80 mo) T(-3.67 mo)
TOTAL & AVERAGE SCHOOL G	2	17	Ed Gp(10) T(7)	12(71%) i.e.12 of 17	Ed Gp(70%) i.e 7 of 10 T (71%) i.e. 5 of 7	Ed Gp(-3.10 mo) T(-2.57 mo) i.e. Tot mo sum / Total N
H	#18	8	Ed G+T(5) C(3)	5(63%)	Ed Gp+T(50%) C(13%)	Ed G+T(-2.00 mo) C(- .33 mo)
	#19	5	Ed G+T(2) C(3)	1(20%)	Ed Gp+T(0%) C(20%)	Ed G+T(+.50 mo) C(+.33 mo)
TOTAL & AVERAGE SCHOOL H	2	13	Ed G+T(7) C(6)	6(46%) i.e. 6 of 13	Ed Gp+T(57%) i.e.4 of 7 C(33%)i.e. 2 of 6	Ed G+T(-1.28 mo) C(0.0 mo) i.e. Total month sum / Total N

PROGRESS REPORT

1 September, 1968 - 5 March, 1969

The Second Grade Underachievers Program staff reported to MFY on September 9th, to coincide with the opening day of school. Staff consisted of four full-time and two part-time (control group) group workers, all of whom participated in three weeks of intensive training sessions based on the manual developed during the pilot and first year of SGUP. During this period, the group workers also conferred with advisory and other staff of the settlements and churches designated as sites for the project's operations.

On September 4th principals of participating schools were informed by letter that the project was underway. Since it was expected that most of the teachers would be new to the project, they and cooperating guidance personnel were invited to a meeting on September 20th to familiarize them with the aims of the project and offer some clarification of the research design. However, by that date the first school strike was already in progress, so a second meeting was scheduled for October 17th. When that, too, had to be canceled due to the continued strike, it was decided to contact schools on an individual basis as soon as possible after school began. This procedure was followed when school reopened in mid-November.

Our first contact with most teachers was in late November. Some of them had not yet agreed to participate in the project and were discussing it for the first time. Approximately one half of the teachers had not been informed by their principals of the project prior to the final reopening of school, and those who had agreed to participate knew little or nothing about it. We found it necessary, then, to go through a series of discussions in each of the eight schools before it was clear to all just what was expected in the way of referrals, etc. We had planned to allow each teacher three weeks to observe her class after school reopened, before making referrals. It should be mentioned that at that time the still tense atmosphere prevailing in the schools, and in the Lower East Side community generally, impeded our progress. Referrals had been scheduled to be completed by December 6th; however, in all of the eight schools there were delays of from one to four weeks before the teachers actually released lists of names to the project workers.

Home visits were then made to secure permission for each child to participate. This procedure was found to be more difficult than the previous year, partly because parents were still quite confused about the school situation, wary of school-related activities, and naturally somewhat suspicious of our requests. For the most part, however, the resistance we encountered was due to the 45 minute longer school day now required of all children to make up time

lost during the strike; parents were reluctant to release their children for still further instruction time and because they would be coming home quite late.

One recommendation based on the previous year's findings was for an assignment procedure that would significantly eliminate bias between groups and marked teacher variability. We, therefore, paired schools and randomly assigned children to each of the four services, bussing those from the farthest school to the project site. Unfortunately, dismissal time currently varies from school to school because the 45 minutes extra time has been applied in different ways. Children attending the same group from two schools arrive at different times (from 10 to 20 minutes). This situation makes for difficult programming and group coordination.

The extra school time has also created problems for our high school tutors, some of whom have had to be released early from their classes. We were also unable to hire some of the best qualified and most eager high school students because they could not be excused. Most of the high schools in the area dismiss their regular session at 3:30 PM; the elementary schools vary from 3:00 to 3:20 PM. An introductory training session for the tutors and group assistants was held on December 19th. Nineteen of the 22 then hired attended; however, in subsequent weeks approximately one third dropped out and had to be replaced. With the beginning of

the second semester four tutors were forced to leave because of changes in their school programs. Though we contacted their guidance counselors in an attempt to intercede--since they were genuinely interested in SGUP, already involved with their children, and were very much in need financially of after-school employment--nothing could be done. There is general agreement among our staff that, had this been a normal school year, the drop-out rate among tutors would have been at least halved.

Unfortunately, all SGUP groups could not start at the same time. Four began the week of January 6th, the earliest after our anticipated deadline of December 23rd. (The Christmas week holidays, though not officially scheduled as school holidays, did, in fact, take place and very few children in the community attended during that time.) Five groups began the week of January 13th, and the remainder the week of January 27th. Most of the late starts were due either to late referrals from teachers, difficult home visits, or a combination of both. In one school there was so much post-strike confusion that no one in the administration was delegated to select teachers for SGUp until mid-January, despite repeated reminders.

Four groups never achieved their full complement of children, because of an unusually large number of drop-outs during the first month, once again due to confusion around the school strike. The

average number of children missing from these groups is two. SGUP's Research Director was obliged to establish a cut-off point, after which time new referrals were not accepted for the project.

Testing was begun after one or two group sessions had taken place. Though the majority of the children were tested during the last two weeks in January, four groups did not begin testing until the week of February 3rd and there had to be individual pick-ups for absentees all during the month of February. We tested successfully in groups of no larger than ten with the examiner having one assistant, as recommended in the previous year's findings. The testing procedure was also facilitated by the group workers' ability, after a training period, to administer tests with minimal assistance from research staff. All the group workers, including control group, employed in this year's SGUP have had considerable experience with children from this community.

Another recommendation based on the previous year's findings was for a more intensive coordination of the project services with daily school work. To this end, we have increased our conference time with teachers and have arranged for the group workers to observe classes. Also, according to recommendations, we have a male group leader and opposite sex assistants in all cases to maximize rapport.

The project staff acknowledges that they are only now, after March 1st, able to introduce regular use of educational games and

related techniques with the educational groups. This is indicative of the children requiring an adjustment period subsequent to the initial testing to become more cohesive before group programs can be appreciated.

We do not anticipate being able to conduct the SGUP groups past the third week in May, at which time we will be obliged to begin the second testing period. There will also be one week's vacation for Easter, April 4th through 11th. Most probably, then, the amount of time allowed the workers to conduct the various activities will be insufficient to yield significant results between groups. In addition, we will only be able to submit classroom behavior rating instruments to the teachers twice this year instead of three times, which will result in a relatively short time span between the initial and final teacher behavioral adjudgments. It is possible that these, too, will produce insignificant results.

An additional relevant finding has come to our attention. Unsolicited complimentary reports on children who were involved in the first year of the program have been received from third grade teachers. A moderate follow-up study is being readied. It may well be true that many benefits (or the intensity of some benefits) derived by SGUP children were not immediately measurable.

In view of the above finding, and because the disruption of this academic year by the three-month school strike has minimized the possibility of our achieving immediately measurable results with 68-69 SGUP children within the available time, we propose a third year for SGUP, according to the following design:

1. SGUP will become a third grade project, using the same research design, educational methods and techniques, but altering its curriculum to the next grade level. Most of the materials now in use can be readily adapted to the third grade curriculum.

2. Children in this year's SGUP will be retained for an additional year to commence September 1, 1969, allowing their academic achievement to be measured over a period of 15 months instead of four, and pointing up the possibility of our obtaining significant results heretofore not immediately measurable.

3. Given the population mobility in the area, a drop-out rate of at least one fourth would be expected by September, 1969; of the approximately 115 remaining children, the 80 most appropriate referrals would be selected, the remainder alternates, limiting the project to one half its current size, and bringing up to full complement those groups now underenrolled.

4. Four of the present eight sites would be selected on the basis of their suitability and location.

5. Staff would be reduced as noted in the budget.

AN EXPERIMENTAL AFTER-SCHOOL PROGRAM FOR UNDERACHIEVING SECOND GRADERS
September 1, 1968 -- August 31, 1969

The Second Grade Underachiever's Program (SGUP) was conducted over a two year period corresponding to school years 1967-1968 and 1968-1969. Different subjects were used the second year. The foci of the project this latter year were to refine techniques and correct methodological faults which may have contributed to inconclusive results obtained the first year. However, some longitudinal data are included on the first year subjects due to a modest follow-up of their progress in the third grade.

The rationale of the project and referral criteria were unaltered, the second year, (See SGUP report for 1967-1968). However, several slight changes were made in methodology and research design. (1) Each Educational Group and Educational Group plus Tutoring was reduced from ten to eight children while Tutoring and Control Groups were kept at ten. This was done because it was reported by the Educational Group workers the first year that they could have been more effective with groups of children somewhat smaller than ten. (2) Children were randomly assigned to each of the four groups thereby giving every teacher a chance to have children in each of the four different services, thus eliminating contamination by variability between teacher competence. Even though this procedure necessitated bussing over one fourth of the children to their meeting place after school, it was felt to be that important. Furthermore, the random procedure for assigning children to all four types of services helped prevent having a disproportionate number of the most academically retarded

going into one or two of the services. In the first year of the study, a vast 47% of the Educational Group children scored below first grade on their initial reading segment of the MET, compared to 10% of the Control Group children. (3) Two paid control group leaders were hired to conduct the four control groups to add stability to them. Although the volunteers who conducted the control groups the first year did commendably well at adhering to the philosophy of not including educational games and activities, their stay, nevertheless, did not usually span the course of the school year.

Like the second year subjects, all six of the group workers were also new to the project. They in turn hired tutors and group assistants who were not involved in the project the first year. The tutors and assistants were, again, mainly indigenous high school students. Four of the six group workers chose an assistant group leader of the opposite sex. One group worker was male. Each group worker had had some teaching experience and/or experience with children in groups.

One different school and one different agency were taken into the project the second year in lieu of the same number dropped. Regarding the new agency, this was done to improve upon facilities needed for particular group activities. The new school was taken into the project mainly because it was very near this agency. The other seven agencies and seven schools participated in the project both school years. However, only one of the teachers who participated in the project the first year did so the second year due to the school's grade rotation policy.

Seventy percent of the children in SGUP the second year were Spanish speaking compared to 69% the first year. About 20% of the children both years were Afro-American while about 10% were Chinese and other ethnic groups.

DATA COLLECTION AND INSTRUMENTS

The sources of data collection were essentially the same the second year as the first. (see 1967-1968 report, page 6-11). These being teachers, school records, staffworkers having contact with children, non-participating MFY observers and MFY independent testing of children.

1. MFY INDEPENDENT TESTING - The children were given the same standardized achievement test the second year, the Metropolitan (MET) Achievement Test Battery, Primary I. (See SGUP report 1967-1968, page 6-7 for rationale and test components). Unfortunately, due to the fact that there was a school strike which finally ended on November 19, 1968, testing did not begin until late December and early January. Despite the responsible participation of group ;workers themselves in testing children the interval between first and last MET testing, about 6½ months, is still considerably shorter than that of the first year. In the main, children were tested in groups of 8 or 10 with adequate assistance available in the person of tutors and assistant group leaders.

2. TEACHER REPORTS AND SCHOOL RECORDS - At the beginning and near the end of the school year data were gotten from teachers in the form of original questionnaires and a standardized behavior instrument, the Pupil Behavior Inventory. Unlike the first year, no data were collected from the teachers at the mid-point of the second school year because of the time factor resulting from the teacher strike. Indeed, the Bristol Social Adjustment Guides (BSAG), a standardized instrument used to detect behavior disturbance, in kind

and severity, could not be used at all. And although the Pupil Behavior Inventory (PBI), which is said to measure behavioral and attitudinal factors which affect success in school was sent to the teachers at the beginning and near the end of the school year, their return were not as favorable as the first year, both in terms of promptness and quantity. Nevertheless, teacher response was large enough to permit statistical test in the behavioral data although now it becomes a matter of measuring change for an average interval of several months rather than nine months, which was the time span the first year.

Transcripts from the children's first and second grade school records were included as part of the teacher's referral forms and questionnaires. This included grades received in class work as well as their scores obtained on the parts of the MET that were administered at school (Reading and Arithmetic). Unfortunately, the school administrated MET tests were the same form as MFY tests given early in the year. Therefore there is some question of the validity of the school results since the children may have been test wise. (An alternate form of the MET was administered by MFY near the close of the school year which was comparable to that given at the beginning of the year).

3. <u>STAFF WORKERS HAVING CONTACT WITH CHILDREN</u> - The four educational group leaders and the control group leaders were required to complete forms weely pertaining to games and activities employed. At the end of the year they made a comprehensive report on each child in their Educational Group and Educational Group plus Tutoring. Tutors were required to keep notebooks on individual children and complete

a questionnaire on each at the end of the year. Control group leaders also submitted a year-end report on each child in their groups.

4. NON PARTICIPATING MFY OBSERVERS - Four volunteer college students were used as non-participating MFY observers of children in the four types of services. Their protocols were translated into a standard form developed to evaluate the effectiveness and kind of material presented in the different groups. These volunteers, who were either psychology, sociology or education majors, received course credit at their respective schools for their services.

RESULTS AND DISCUSSION

Achievement Test Results: Twenty-eight Educational Group children received the MET Word Knowledge test at both the beginning and end of the school year compared to twenty-three Educational Group plus Tutoring children, twenty-four Tutoring children and twenty-three Control children.

Twenty-seven Educational Group children received both Word Discrimination tests compared to twenty-two Educational Group plus Tutoring children, twenty-three Tutoring children and twenty-three Control group children.

Twenty-seven Educational Group children received the MET Reading test compared to twenty-two Educational Group + Tutoring children, twenty-three Tutoring children and twenty-three Control Group children.

The number of children who received both Arithmetic tests were the same as Word Knowledge, i.e. twenty-eight, twenty-three, twenty-four and twenty-three respectively.

The Kruskal-Wallis, (a non-parametric one way analysis of

variance) was used to test the overall significance between the four groups on each of the four MET subtests. There was no overall significance between groups on Word Knowledge but the converse was true for Word Discrimination, Reading and Arithmetic. This exact pattern was seen in the first year test results.

Word Discrimination: Six comparisons were made between the four groups, two at a time using the Mann Whitney U test. None was statistically significant. Table I below describes the test results obtained on this test.

TABLE I

WORD DISCRIMINATION TEST RESULTS FOR CHILDREN IN SGUP

GROUP	N	Grp level Beg of Yr	Group level End of year	Group Increment	Group Decrement
Ed Grp	27	-.696	-.767	-----	-.071
Ed Gp+T	22	-.641	-.868	-----	-.227
T	23	-.809	-.830	-----	-.021
C	23	-.722	-.774	-----	-.052

It can be seen above in Table I that testing at the beginning of the year showed children in all four groups to be over six months retarded in Word Discrimination. It can also be seen that each group's score was indicative of a decrease ranging from less than one month to slightly over two months.

While Table I above describes the group differences in terms of discrepancy between their achievement levels at the beginning and end of the school year, Table II below shows the differency by proportion of children in each group whose achievement levels were below, on or above grade level on this same test, Word Discrimination.

TABLE II

PROPORTION OF CHILDREN IN SGUP BELOW ON OR ABOVE GRADE LEVEL IN WORD DISCRIMINATION.

GROUP	N	Beginning of Year Below	On	Above	End of Year Below	On	Above
Ed Group	27	23	1	3	24	0	3
Ed Group+T	22	20	0	2	21	0	1
T	23	23	1	0	21	0	2
C	23	23	0	0	23	0	0

Chi Square tests of significance between groups, each group compared with the other three, revealed no significance on Word Discrimination regarding the number of children whose scores increased or remained the same and those that dropped.

Reading: None of the six comparisons made between the four groups was significant. Table III below describes the Reading results:

TABLE III

READING TEST RESULTS FOR SGUP CHILDREN

GROUP	N	Group level Beg of year	Group level End of year	Group Increment	Group Decrement
Ed Group	27	-.870	-.756	.114	----
Ed Group+T	22	-.782	-.850	----	.068
T	23	-.900	-.900	---- same	----
C	23	-.770	-.822	----	.052

It can be seen in Table III above that only the Educational Group children's score at the end of the year reflected an increment, slightly over one month, while the T children's score remained static and the Educational Group+T and Control children's scores dropped almost one month. Each group's retardation level in Reading was over seven months at the beginning of the year. Although there was no statistical significance between the amount of change between groups on Reading , the direction of change is in Educational Group children's favor.

Table IV below shows the proportion of children in each group

whose Reading scores were Below, On or Above grade level at the beginning and end of the school year.

TABLE IV

PROPORTION OF SGUP CHILDREN BELOW, ON OR ABOVE GRADE LEVEL IN READING

GROUP							
Ed Group	27	26*	0	1	23*	0	4
Ed Group+T	22	22**	0	0	19**	1	2
T	23	23***	0	0	22+	0	1
C	23	23#	0	0	21	0	2

*two children scored below first grade
**two children scored below first grade
***two children scored below first grade
+four children scored below first grade
#one child scored below first grade

Chi Square tests of significance between groups, each compared with the other three, revealed no significance on Reading regarding the proportion of children whose scores increased or remained the same and those that dropped.

Arithmetic: None of the six comparisons made between the four groups was significant. Table V below describes the Arithmetic results:

TABLE V

ARITHMETIC TEST RESULTS FOR SGUP CHILDREN

Group	N	Group level Beg of year	Group level End of year	Group Increment	Group Decrement
Ed Group	28	-.536	-.414	.122	----
Ed Group+T	23	-.448	-.430	.o18	----
T	24	-.558	-.308	.250	----
C	23	-.578	-.583	---	.005

It can be seen above in Table V that the groups were close to five and six months retarded in Arithmetic at the beginning of the

year. However, at the end of the school year all scores except that of the control group are indicative of increment; tutoring by almost three months and Education Group slightly over one month. Since it was also seen that the Educational Group children uniquely increased their Reading score by slighly over one month, it may be interpreted to mean that that group was moving toward meaningful positive academic improvement. Undoubtedly, the impressive increase in the Arithmetic score of the children in tutoring reflects the amount of concentration spent in this area. Like the children they tutored, the tutors themselves felt more comfortable and were able to deal with academic problems of a mathematic nature better than those pertaining to developing and improving reading skills.

Despite the lack of statistical significance obtained on the MET, these results are impressive, in the favorable direction, considering the extremely short school year.

Table VI below shows the proportion of children in each group whose Arithmetic scores were Below, On or Above grade level.

TABLE VI

PROPORTION OF SGUP CHILDREN BELOW, ON OR ABOVE GRADE LEVEL IN ARITHMETIC.

		Beginning of year			End of year		
GROUP	N	Below	On	Above	Below	On	Above
Ed Group	28	22*	2	4	21	1	6
Ed Group+T	23	21	0	2	19	1	3
T	24	19**	2	3	16+	2	6
C	23#	21	1	1	18	2	3

*five children scored below first grade
**four children scored below first grade
+one child scored below first grade
#five children scored below first grade

For reasons already suggested, the Tutoring children's performance on Arithmetic in terms of number who improved is also most favorable, followed by Educational Group children. However, like the Chi Square tests between group proportions who improved remained the same or changed or the other three MET tests, the Chi Square tests on arithmetic weren't statistically significant.

Table VII below is presented to summarize the outcome of the groups on the three MET subtests when their achievement levels at the beginning and end of year were compared. The second and fourth columns in the table denote whether the statistical test was significant while the groups presented in columns one and two crudely means that their scores were in the more favorable direction.

TABLE VII

SUMMARY OUTCOME OF GROUPS ON MET SUBTESTS

MET SUBTESTS	MOST FAVOR 2 GPS ON QUANTITATIVE COMPAR	SIG	MOST FAVOR 2 GPS ON PROPORTIONAL COMPAR	SIG
Word Disc	Tutoring, control	not sig	Ed Grp, Tutoring	not sig
Reading	Ed Gp, Tutoring	not sig	Tutoring, Ed Gp	not sig
Arith	Tutoring, Ed Gp	not sig	Tutoring, Ed Gp	not sig

Unlike the results of the first year, it can be seen above in Table VII that the control group does not hold the most favorable position.

In conclusion, it may be briefly stated that the children in the Educational Group made impressive gains, particularly in Reading, but also in Arithmetic, despite the short school year. Likewise the children in Tutoring made an impressive increment in Arithmetic.

It is most unfortunate that the program could not run the course

of a complete school year after the methodological errors made the first year were corrected. It is strongly felt that had this been the case, the efficacy of educational material presented in the context of group games could have been more considerably demonstrated.

FOLLOW UP DATA ON FIRST YEAR SGUP CHILDREN NOW IN THIRD GRADE:

Data were received from third grade teachers on 26 children who were in Education Group the first year of the project, compared to 10, 21, and 12 Educational Group + Tutoring, Tutoring and Control children respectively. Of these, 84% of the Educational Group children were reported to be below grade level in reading or arithmetic compared to 70%, 95% and 67% of the Educational Group + Tutoring, Tutoring and Control children respectively. Like the results of the first year, the Control group still holds the ;most favorable position. Again, this cannot be interpreted to mean that this resulted from their experiences in the Control group as opposed to the other three services. This is particularly true when viewed in the light of data collected the second year. It is believed that the Control children, did in fact have more competent teachers, which may have a residual effect at least one year later on their academic performance. (However, the fact that more Educational Group children, 47% scored below first grade initially compared to 10% for Control children might also be a factor.)

This opinion may be further supported by the Pupil Behavior Inventory (PBI) data on the same children and promotions.

When the second PBI scores taken when the children were in

the middle of second grade are compared with their PBI scores at the end of third grade, it is seen that unlike the first year when no test was significant, three of the five dimensions are significant.* The two dimensions that are not significant are Classroom Conduct Socio-Emotional State. The three dimensions that are significant are Academic Motivation (in favor of Control Group), Socio Emotional State (in favor of Tutoring and Control groups) and Personal Behavior (in favor of Educational Group followed by Tutoring and Educational Group + Tutoring).

While Academic Motivation and Performance is said to measure exactly that in the classroom, Socio Emotional State deals with peer relations while Personal Behavior is said to be an indicator of the pupil's conformance to standards which are valued and sanctioned in the broader community and which may be manifested as a part of his behavior in the classroom setting. In regard to this last dimension, Personal Behavior, it is interesting that at least three of the four group leaders felt that they had been most effective in "socializing" their children.

In regard to promotions, one of the twenty-five Educational Group children is being retained in third grade compared to 1, 4, and 0 children corresponding to Educational Group + Tutoring, Tutoring and Control groups respectively. Again the Control group holds the most favorable position.

*Analysis of Difference method of analysis of variance i.e. between one set of second grade scores and one set of third grade scores.